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ABSTRACT

This paper summarizes research findings on teacher behavior and its relationship to student reading achievement. Research studies included in the review identified actual teaching behaviors, included observations of teacher-learner interactions, were limited to elementary school, and were conducted between 1966 and 1972. Subjects covered in the studies include: (1) instructional time and student achievement; (2) direct instruction; (3) classroom climate and teacher management; (4) teacher praise and criticism; (5) teacher expectations; (6) teachers' use of questions; (7) specialized subject matter teaching behaviors; and (8) changing teacher behavior through interactive inservice programs. A discussion is presented on the research methodology used in these studies, the general reliability of research findings, and significant and recurring findings brought forward by this review. A list of 126 references is included. (JD)

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TEACHING BEHAVIORS IN READING INSTRUCTION:

A REVIEW OF THE RESEARCH AND CRITIQUE

by

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A paper presented at the Annual Convention
of the American Association of Colleges for
Teacher Education; February 24, 1983

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Through the encouragement and direction of the National Conference on Research in English (NCRE), the federal government in the 1960's supported one of the largest studies of reading instruction ever undertaken. Commonly referred to as the Twenty-Seven Beginning Reading Studies, this nationally directed project coordinated the efforts of a group of researchers based in areas throughout the United States. It attempted to determine the relative effectiveness of various kinds of instructional programs, including basal reading, initial teaching alphabet, language experience, phonic/linguistic and linguistic approaches. Although a number of important findings resulted from this research effort, the one that received the most attention was

> Instructional programs were relatively effective in some projects, relatively ineffective in others.... This variability in effectiveness cannot be explained on the basis of pupil characteristics.... (Dykstra, 1970, pp.490-41)

And furthermore;

> One of the most important implications of this study is that future research should center on teacher and learning situation characteristics rather than method and materials. Reading instruction is more likely to improve as a result of improved selection and training of teachers, improved in-service training programs, and improved school learning climate, rather than from minor changes in instructional materials." (Dykstra, 1968, p.66)

In the early 1970's, the members of NCRE considered the implications of the Beginning Reading Studies:

> The beginning of this decade found NCRE re-examining and amplifying the Beginning Reading Studies. It is well known that the major significance of those studies were twofold: (1) they showed no overwhelming and pervasive superiority of any one method over other methods and (2) they did show greater differences in pupil achievement from teacher to teacher within method than from method to method.... Two questions emerge as the goal of new investigations: (1) What are the significant differences from teacher to teacher within method? and (2) How can researchers approach the enormous problem of how to study specific teaching behaviors in the language

Most references cited in this paper are for illustrative purposes only. In most cases, numerous additional references could have been used.

> arts curriculum and how can they assess the relationships of these behaviors to pupils' learning?(Robinson & Burrows, 1974, p.2)

Thus, the overriding consequences of the Twenty-Seven Beginning Reading Studies was to focus widespread attention on teaching and learning. For the past ten to twelve years, the teaching factor of the teaching-learning diad has been the target for study. It was puzzling to many educators that special methodology related to reading instruction seemed to have so little influence on pupil learning, that different methods did not result in differences in the reading achievement of pupils. In a later interpretation of why a generation of studies of teaching methodology had led to so many unsatisfying results, Berliner and Gage proposed:

> The fact that socially significant amounts of student learning occur regardless of the teaching method used [may be because] the information conveyed by the various teaching methods is coded, stored, and retrieved from memory in similar ways by different people no matter how the information was first obtained.... Several students, each exposed to only one of several different teaching methods, learn the same concept, principle, or behavior.... Different teaching methods should not have different effects on student outcomes when the content to be learned is similar.(Berliner & Gage, 1976, pp.13-14)

As early as 1967 Jeanne Chall, a noted reading specialist, claimed that the teacher was a more important area of study than methodology or the curriculum (Chall, 1967). Numerous other authors have more recently cited the importance of the teachers as related to achievement in learning (Brophy & Evertson, 1974; McDonald & Elias, 1976; Pederson, Faucher & Eaton, 1978; Stallings & Kaskowitz, 1972-73).

Thus, NCRE began in 1969 an effort to study teaching behaviors as opposed to teaching methodology. But they became aware that much of the previous research on teacher personality and characteristics (Barr, 1935) had provided mixed results. Research on teacher-student interaction and

classroom climate was in its infancy. Nevertheless, NCRE identified four criteria as a basis for the inclusion of studies to be used in a special investigation of the literature on teaching behaviors and charged certain individuals with the responsibility of conducting a review of publications in the areas of the language arts: reading, spelling, listening, linguistics, oral language, and writing. The criteria established stated that a research study to be included in the review had to:

1. Identify actual teaching behavior;
2. Include observations of teacher-learner interactions;
3. Be limited to the elementary school;
4. Be conducted between 1966-1972.(Robinson & Burrows, 1974)

Robert Emans and Sharon Fox (1974) were charged with the review in the area of reading. The purpose of this present paper is to bring up-to-date the previously conducted review in the light of a critique of recent findings. A number of observations became immediately obvious.

1. The number of studies conducted on teaching behaviors had proliferated substantially. Emans and Fox could find only fifteen studies that met the above criteria. It is no exaggeration to say that there are now probably several hundred studies in reading conducted since 1972 that meet the criteria. There are now nearly as many major literature reviews as there were single research studies at that time (For example: Borich, 1977; Brophy & Good, 1974; Duke, 1979; Dunkin & Biddle, 1974; Flanders & Nuthall, 1972; Gage, 1972, 1975, 1976, 1978; Good, 1974; Heath & Nielson, 1974; Medley, 1977; Peterson & Walberg, 1979; Rosenshine, 1970, 1979; Rosenshine & Furst, 1973).

2. Most of the more recent studies have been conducted not by individuals concerned with the causal relations of methods and learning, but with correlating teaching behaviors with specific student achievements. As Brophy has stated:

> The result has been a proliferation of research on teaching, conducted mostly by people who are not strongly committed to particular methods.... This has produced a steady accumulation of sensible and often replicated findings that constitute a growing knowledge base about process-product correlations and, to a lesser degree, causal relations.(Brophy, 1979, p.734)

3. Most of the studies conducted have been related to reading and arithmetic. Few studies have involved the other areas of the curriculum. Just as was found in the original NCRE study, few studies have been conducted recently on teaching behaviors in spelling, writing, oral language, literature, etc. The results involving arithmetic have been similar to those concerned with reading. Since much of the recent research has been on reading and arithmetic, and since the findings on teaching behaviors in reading and arithmetic are similar to each other, it is not surprising that findings of research reported in this paper are like those reported elsewhere on teacher effectiveness. The major contribution of this paper may be the compilation of the research findings on teaching behaviors and the perspective provided with respect to the developments in other aspects of reading instruction and the curriculum in general.

4. As will become obvious, although much added research has been conducted in the last decade, there have been few surprises. Many of the findings could have been predicted from the findings of the earlier NCRE study. Significant details have been added, but much of what is known today

was foreshadowed by the relatively small number of pioneer studies. This is encouraging inasmuch as it shows that research on teaching behaviors is cumulative and worthy. It is discouraging inasmuch as it would seem to be time to move on to other areas of investigation. As Medley has said, "The chances that future research might alter them [his findings] in any important respect are negligible" (Medley, 1979, p.25).

Time

Perhaps no area shows more dramatically the confirming effect of research than the studies conducted on the amount of time devoted to instruction. In the early studies by Harris and Serwer (1966) and by Soar (1970) cited in the NCRE review, the conclusion was that instructional time spent on reading, not time spent in reading-related activities, was positively correlated with reading achievement. Numberous later studies have confirmed and extended this finding (Brookover, et.al., 1978; Corno, 1979; Fisher, 1978; Rosenshine, 1979; Stallings & Kaskowitz, 1972-72; Wiley & Harnischfeger, 1974). Merely allocating time to reading is not nearly as important as what happens during that time. What teachers choose to emphasize in their classrooms is more important than a school-wide policy regarding the extent to which reading instruction is stressed. As Corno concluded, "Engaged learning time becomes the most immediately promising focal point in the effort to improve academic achievement" (Corno, 1979, p.259). Engagement time, as opposed to allocated time, and academic learning time, i.e., time spent on materials that are at an easy level of difficulty (Berlinger, 1979; Clark & Yinger, 1979) has become a useful surrogate for measuring the amount of content covered (Armento, 1975; Rosenshine, 1979). "Time spent engaged in relevant content appears to be essential for achievement"(Rosenshine, 1979, p.47). As McDonald has put it,

"If students have not been taught...some...content or procedure, they simply do not do well on those portions of the test relevant to that topic" (McDonald, 1976, p.27).

Direct Instruction

An outgrowth of the research on time devoted to instruction has been the concept of "direct instruction." In an apparent foreshadowing of the increasing stress being placed on direct instruction were the conclusions of Harris and Serwer (1966) and of Chall and Feldmann(1966). They found that teachers whose behaviors were most characteristic of their selected approach in teaching, e.g., basal or language experience, helped children to higher achievement in reading. Good and Grouws (Good, 1979) reported similar results from a study conducted in 1979. Soar (1968) concluded that beginning reading skills are learned best through direct teaching.

Summarizing the research, Rosenshine described effective teaching through direct instruction as being:

> goals are clear to students
> time allocated for instruction is sufficient and continuous
> coverage of content is extensive
> the performance of students is monitored
> questions are at a low cognitive level so that students can produce many correct responses
> feedback to students is immediate and academically oriented.
> interaction is characterized as structured, but not authoritarian.
> (Rosenshine, 1979)

Medley described the situation in slightly different terms when he stated:

> How to maintain an orderly and supportive classroom climate, how to increase the amount of time devoted to learning activities, and how to improve the quality of learning activities--all three are determined largely by what the teacher does, and research provides detailed information about how teachers behave who do them successfully.... The research strongly indicates that a substantial, if not dramatic, improvement in achievement, in attitudes toward school, and of disadvantaged pupils' self-images would result.(Medley, 1979, p.25)

This brings us to two related issues: the extent the findings of research related to direct instruction can be generalized to the various subgroups of the school's population; and the need to adjust instruction to an appropriate level for the subgroup receiving instruction. One of the conclusions of the NCRE literature review was that various methods were differentially effective for different learning objectives and within different subgroups of the population (Harris, et.al., 1968; Kendrick & Bennett, 1966). The research used in formulating the concept of direct instruction involved children in the primary grades from low socioeconomic populations and for the teaching of arithmetic and reading. Brophy and Evertson (1974) found opposite results for high socioeconomic groups from those for low socioeconomic groups. Medley raised the concern that "Most of the behaviors found to be ineffective with pupils of high socioeconomic status, and vice versa (Medley, 1979, p.22). Neverthless, a study (Anderson, Evertson & Brophy, 1979) found that the principles of direct instruction could be used effectively in middle-class, Anglo schools. A number of studies (Evertson, Anderson & Brophy, 1978; McConnell, 1977; Stallings, Needels & Stayrook, 1979) showed that directives based on research evidence from direct instruction studies could be used with good results, but "only to the extent that basic skill mastery is the primary goal (Brophy, 1979). Perhaps the clue for understanding the discrepancy is related to differentiating the possible purposes for direct instruction.

In the NCRE literature review, studies both by Chall and Feldmann (1966) and by Browne (1971) indicate that effective teachers gear their lessons to the ability level of children. More recent studies confirm these findings

(Crawford, 1978; Jorgenson, 1977) and provide more specific information. Low error rates correlate positively with achievement, while high and even moderate error rates correlate negatively (Rosenshine, 1979, p.44). These findings led to the conclusion that instruction is best when it allows students to provide mainly correct responses with very few errors.

Classroom Climate and Teacher Management

Much seems to have been learned in the last decade about classroom climate and teacher management. Soar and Soar (1979) recommend that a clear distinction be made in thinking about emotional climate involving praise and criticism of pupil behavior and classroom management involving control and freedom of physical movement, fluidity of grouping, and socializing among children. Wallen (1966) in the NCRE review found evidence that children achieved less well under controlling teachers than teachers permitting some freedom. Morrison (1968) concluded that restricting the content to be learned limited the quality of teacher-pupil interaction. A series of studies in the NCRE review (Chall & Feldmann, 1966, Soar, 1968; Wallen, 1966) came to apparent contradictory conclusions regarding the effect of teacher praise and criticism. Some of the confusion of the past seems to have been clarified with more precise studies being conducted. Taking his clue from Soar and Soar, this writer will focus first on classroom management, and then move into a discussion of emotional climate involving teacher praise and criticism. This discussion will be followed by an examination of the often controversial research findings concerned with the relationship of teacher expectations and pupil achievement spawned by Rosenthals' "Pygmalion in the Classroom" classic study (Rosenthal & Jacobson, 1968).

The early work on teaching styles (democratic, authoritarian, and laissez-faire) has been swept aside as being inconsequential. "Terms like 'pupil centered,' 'democratic,' or 'permissive' as descriptions of classroom behavior are too global and nonspecific to be useful" (Soar & Soar, 1979, p.118). As the present time, good classroom management has come to be equated with good instruction (Brophy, 1979). Much of the current literature on "direct instruction" consider teacher control to be almost synonymous with "direct instruction," and promotes direct instruction primarily as an activity by which teachers gain and keep control of the classroom. As Brophy and Putman state, "Much research indicates that teachers who are good classroom managers also tend to produce more student learning" (Brophy & Putman, 1979, p.187). Indeed this point of view can be found in much of the professional literature (Anderson, Evertson & Brophy, 1979; Medley, 1979; Rosenshine, 1976; Soloman & Kendall, 1976; Stallings & Kaskowitz, 1972-1973). Solomon and Kendall (1976) found that teacher control and orderliness are positively related to achievement. Studies by Bennett, et.al., (1976) and by Wright (1975) concluded that less structure resulted in more student anxiety. Rosenshine (1979) and Anderson, et.al (1979) concluded that direct teacher supervision is important. Solomon and Kendall (1976) found the successful teachers to be strong leaders, giving pupils little freedom of choice, as did Soar and Soar (1979) and Brophy (1979). Stallings and Kaskowitz (1972-73) related negative correlations in reading achievement with story telling, crafts, play, and child selection of activities. Likewise, Brophy and Evertson (1974) found questions about family experience, personal experience, and personal concerns, not only negatively related to achievement, but to lack of pupil motivation as well. Summarizing much of the research on the topic Soar and Soar state:

> Greater amount of freedom of behavior are associated with a decrease in the amount of learning.... A teacher should limit pupil freedom to move about, to form subgroups, and to socialize.... A teacher [should] establish [at least] a minimum [amount] of structure.(Soar & Soar, 1979, p.117)

Nevertheless, they go on to say, "an attempt by the teacher to stop all physical movement or to direct activities of pupils one step at a time was negatively related to a factorially derived measure of complex achievement." "Authoritarian, punitive, or other negativistic approaches to classroom management never succeed very well"(Brophy & Putman, 1979).

As indicated previously by Soar and Soar, the choice of educational goals seem to be influenced to the amount of control desired by the teachers and school administrators.

> The differences were consistent with the interpretation that greater amount of pupil freedom were functional for complex, high cognitive-level learning objectives, but lesser amounts of pupil freedom were functional for simpler, low cognitive-level outcomes.(Soar & Soar, 1979, p.116)

Rosenshine expressed similar concerns (Rosenshine, 1979). But Soar and Soar warns that "the typical teacher does not distinguish the management of behavior from the management of learning tasks or the management of thinking" (Soar & Soar, 1979, p.109).

Not only does the literature relate the amount of teacher control and pupil freedom to differing educational objectives; but it also relates control-freedom to different populations (Good, 1979). "Approaches to classroom management must be suited to the developmental level of the students if they are to be effective" (Brophy & Putman, 1979, p.193). Fisher, et.al., (1978) showed that more teacher control may be desirable for the lower grades than for the upper grades. And Brophy (1979) concluded that more structure is needed for anxious students.

Finally, in considering the literature on teacher control of pupil behavior, the number of different activities and their complexity must be a consideration. Many activities going on at the same time are negatively related to pupil achievement; classrooms are more disorderly; and students are less attentive (Rosenshine, 1979). Varied and complex materials and activities create more complexity to be managed by the teacher. The teacher has to be especially competent in such circumstances or learning may suffer (Doyle, 1979). Complexity in instructional organization may not be beneficial (Cohen, et.al., 1979).

Praise and Criticism

As mentioned previously, the research on teacher praise and criticism of pupil behavior has produced mixed results. This is probably because the effect of the emotional climate in the classroom is more complex than is often thought. In the NCRE study it was found that both too much praise and too much criticism could lead to lowered achievements (Harris, et.al., 1968). Criticism of students is relatively rare in most classrooms (McDonald, 1976). Soar found that some criticism could result in achievement in beginning reading skills; but it was counter-productive for vocabulary development and learning of abstractions (Soar, 1968). Rosenshine and Furst (1973) and Dunkin and Biddle (1974) concluded that criticism was negatively related to learning and praise was neither positively nor negatively related. Brophy and Evertson (1974) found that neither praise nor criticism was negatively or positively related for low socioeconomic status children; but criticism was positively related for high socioeconomic status children. Other investigators found praise to be positively related. Solomon and Kendall (1976) concluded that "The avoidance

of negative affect is important to pupil gain, but the expression of positive affect is not related." And Brophy (1979) states, "Praise seems to be generally overrated, although it does seem important for less ability/anxious/dependent students, provided that it is genuine and deserved and the praiseworthy aspects of the performance are specified." Thus, it seems that the effectiveness of both praise and criticism seems to depend upon how they are used and with whom. Stallings and Kashowitz (1972-73) believe that praise and criticism must have an academic focus and not be used in respect to general behavior. Anderson, Evertson, and Brophy (1979) state that the research evidence supports the view that criticism is of value when it is specific, includes the desired or correct alternative and used in moderation. Brophy and Putman believe that praise, in order for it to be effective, must be "sincere, adapted in form and intensity to the specific accomplishments in question, adapted to the preferences of the individual student involved, and specific in describing exactly what the student did that was praiseworthy" (Brophy & Putman, 1979, p.205). Esten (1975) believes that the child must value praise in order for it to be effective. One of the implications from the NCRE review was that "High praise is personal rather than objective.... Perhaps this suggests to the child that he will be loved only if he performs in the way the teacher likes rather than according to his own judgement of what is right" (Emans & Fox, 1974, p.57). Doyle (1979) cites references that praise from teachers has little relationship to the accuracy of students' responses; Good (1979) found that ineffective teachers praised incorrect answers; and Anderson, et.al., (1979) concluded that when a pupil gives correct responses teachers should say nothing but continue the lesson in an

effort to keep it going at a smooth pace. The above evidence is probably best summarized by the familiar adage that we can dislike a child's behavior but not the child, if we are to help him or her learn. Learners do need to feel free to make mistakes believing that teachers do not reject children, only their errors.

Teacher Expectations

Closely related to the emotional climate of the classroom and teacher management of instruction is the research concerning teacher expectation of student success and their academic achievement. Although the early work of Rosenthal's Pygmalion in the Classroom has resulted in much criticism and controversy and involved tests of intelligence, much of the more recent research on teacher expectations has dealt with academic achievement in reading and would seem to provide important findings. The research has stimulated considerable emotional reaction such that those people with a bent toward defending teachers as a group oppose the findings and those people with a bent toward criticising teachers as a group support the findings. The NCRE review discovered that "Some investigators hinted at the possibility of the child's behavior as the initiator of the action in the classroom" (Emans & Fox, 1974, p.57). Wallen (1966), Kendrick and Bennett (1966) and Morrison (1968) observed that effective teaching behavior must be interactive and take account of the receiver as well as the initiator. The work of Doyle (1979) has shown that students influence the behavior of teachers as well as that teachers influence the behavior of students; "Students have a significant impact on the learning opportunities given them and how teachers treat them" (Doyle, 1979, p.187). Citing the work of Doyle and the results of his own study, Copeland concluded: "The teaching-learning behaviors that

occur in any classroom may be seen as the products of interactions of the inhabitants of that classroom...teachers' behaviors are as likely to be the products of pupils' actions as to be their cause" (Copeland, 1980, p.163). Both Dusek (1975) and Cooper (1977) have provided detailed reviews of the extensive research literature on teacher expectations and pupil achievement. Dusek summarizes the findings:

> Evidence indicating that teachers do form expectations for students' performance is abundant. Teachers tend to treat students differently depending upon their expectations for the students' performance. These expectancies, and presumably their behavioral manifestations, have been shown to relate to students' academic achievement.... To the extent that teachers' self-generated expectancies...are based on sound, objective data regarding students' abilities, then the teacher is not biasing students' education. Rather the teacher's differential behavior toward the students in the classroom may reflect effective teaching-style differences for students with differing needs. However, if these expectancies are based on impressions or information irrelevant to academic success then the teacher's expectancies may cause some students to be treated in a manner that...may contribute to their doing poorly in terms of academic achievement.(Dusek, 1975, p.680)

An indisputable conclusion from the research surveyed is that teachers treat different children differently. Whether this is good or bad will be discussed later; but teachers do often treat girls differently from boys, high achievers differently from low achievers, and high socioeconomic status children differently from low socioeconomic status children (Cooper, 1979). The early NCRE literature review found that teachers criticize girls less than boys and praise them more (Brophy & Good, 1970). Teacher praise low socioeconomic status children less than high socioeconomic status children; yet they seem also less likely to criticize low socioeconomic status children (Medley, 1979). The work of Davis and Dollard is described as determining that lower-class children gather most of the teacher's corrections, while higher-class children reap the rewards (Good, 1970). The NCRE study indicates that

teachers allowed high achieving children to make open answers but required low achieving children to be specific and literal in their responses, and give more autonomy to high achieving children while giving more direction to lows (Brown, 1971). These findings have been substantiated by later research (Copeland, 1980). Teachers talked one-half to three-fourths of the time while instructing low achieving children, but only one-fourth of the time to high achieving children (Borke, Shavelson & Stern, 1981). They tend to choose more abstract materials for high achieving children; but the opposite is true for low achieving children (Borke, Shavelson & Stern, 1981). Good (1981) cites the following ways teachers vary their behavior toward those judged as slower students:

-seating them farther away from the teacher
-pay less attention to them-smiling at them less
-call on them less often
-wait less for them to respond to questions
-criticize them more
-praise them less
-provide them with less feedback
-demand less effort from them
-interrupt them more often.

Thus the conclusion of the NCRE study that "Teachers provide different learning opportunities for high and low groups according to their perception of their students' abilities" (Emans & Fox, 1974) is still valid.

It can be argued that teachers should treat different children differently. Treating children differently is a way of providing for individual differences. Thus the concern is whether or not treating children differently results in greater or less achievement. For example, Brophy and

Evertson (1979) concluded that calling on another student to supply a correct answer when a child has failed to do so will have a negative effect on the learning of low socioeconomic children but a positive effect on the learning of high socioeconomic children. Nevertheless, the finding of the NCRE study (Chall and Feldmann, 1966) that there are individual differences which, when attended to, do in fact lead to lower achievement is born out by the more recent research evidence. Studies (Allington, 1980) have shown that teachers are more likely to interrupt poor readers who err than good readers who do even when the types of errors are the same. They are more likely to draw the attention of poor readers to graphic-phonic correspondences than they are good readers; yet they are more likely to draw the attention of better readers to the meaning of a passage. These findings are especially significant in the light of Chall and Feldmann's (1966) conclusion, cited in the NCRE review, that a meaning emphasis on the part of teachers is positively related to reading achievement.

The expectation that teachers have regarding how well children will learn does have an effect on children's reading achievement (Brophy, 1979; Brown & Sherbenou, 1981; Cooper, 1979). Much of the research on expectation indicates its effect on student motivation. As Cooper has said

> Student performance differences...can be viewed as sustaining low teacher expectations.... Poor performance and low expectations continue: teacher control over low-expectation interaction is increased through inhibition of slow student initiations.(Cooper, 1979,p.403)

The amount of criticism that teachers give affect motivation. High criticism results in low motivation and the amount of teacher help pupils seek; reducing criticism increases student-initiated interactions (Cooper, 1977). Students who persist at a task are more likely to hold the view that success is related more to effort than ability (Dweck & Reppucci, 1973). This finding is signifi-

cant in the light of the findings that teachers are more critical of boys than they are of girls; but teacher criticism of boys is of a different kind than that of girls. Boys come to view teacher criticism as related to lack of effort and not their ability; while the opposite is true of girls. As a result, girls become more dependent upon teacher approval than boys (Dweck, et.al., 1978).

How teachers group children is also associated with teacher expectations and pupil success. Teachers group children according to subjective evidence; (Dusek, 1975) but a child placed

> into the low-ability group is virtually certain to stay there, even though the reasons for that assignment often have nothing to do with ability.... The poorly behaved student is likely to wind up in the low reading group, regardless of ability. [And] any student, capable or not, will perform below potential in an environment where most learners are doing poorly.(Calfee & Brown, 1979, pp.151-157)

Thus, the inescapable conclusion from the NCRE review and more recent research is that children are often grouped (informally or formally) not in accordance to their abilities but by subjective criteria unrelated to academic achievement. Teachers treat children differently according to how they categorize them in their informal or formal groupings; and this treatment influences how well children achieve in reading. The evidence is that this is true with some teachers, but not all. It becomes important then to determine the subjective criteria that teachers use in forming their expectations of children and why teachers so often treat children differently in ways that result in lower achievement.

The findings, as reported in the original NCRE study, that teachers treat boys and girls differently (Emans & Fox, 1974), and the finding of more recent studies that teachers criticize girls less even for the same misbehavior (Dweck, et.al., 1978), provide evidence that teachers use subjective evidence in viewing children. "That noncontingent reinforcement [based on neatness, following instructions, speaking clearly] does lead to performance deterioration is well documented" (Cooper, 1979, p.402). Certain teacher personality characteristics seem to predispose teachers to behave differently toward various students with specific traits (Rubovits & Maehr, 1973).

Numerous studies have shown that teachers are frequently poor judges of pupils' reading abilities (Bray & Estes, 1975; Brown & Sherbenou, 1981; Clark & Yinger, 1979; Doyle, 1979; Katelis, 1975; Marx, 1978); and they do not improve in their judgements when they get to know their pupils better (Jecker, et.al., 1964). They are able to predict which children will be high achievers; but are unable to distinguish low and average achievers (Clark & Yinger, 1979). Teachers perceive the bulk of their class as reading at grade level even when their children are actually achieving at a considerably higher or lower level (Anastasiow, 1964). Teachers are able to attend only to a few of the many relevant variables in forming their judgements (Borke, et.al., 1979). Thus, as Brown and Sherbenou have concluded, "Teachers' perception of children's reading ability is more closely related to how the teacher views the children's behavior in class than to actual reading performance as measured by tests (Brown & Sherbenou, 1981, p.557). Barr (1975) found that teachers formed their expectations by judging which children had difficulty attending to instruction and which were likely to become restless with a pace of instruction that was too slow for them.

The reasons for teachers using subjective evidence unrelated to academic achievement in forming their expectations for children's success in school are important and, at this point, open to some speculation. It would seem that a fruitful area of study would be on the kind of child behaviors that are deemed most important by teachers and their supervisors. Nevertheless, there is evidence that teachers form their perceptions of children, and their behaviors in treating children differently, even when they are not different, because of the belief they seem to have that good classroom management must take precedence over good classroom learning (Doyle, 1979).

> The way of selecting students to respond appeared to be based on the need to maintain the flow of classroom activity.(Doyle, 1979, p.140)

> Low expectation students, however, may be praised and criticized more often for reasons independent of their personal efforts, namely the teacher's desire to control interaction context.... Teachers perceive the least control over and the least chance of success for interactions initiated by slow students.... [Teacher] control can be minimized over low student performance by inhibiting student initiations.... The teacher can increase personal control through the creation of an unrewarding socioemotional environment and the relatively infrequent use of praise and freer use of criticism in interactions with lows.(Cooper, 1979, p.399-401)

"The greater frequency of criticism that low-expectation students receive [seems to] be related to the teacher's desire for personal rewards"(Cooper, 1977, p.425).

The phenomenon that teachers use praise and criticism and the grouping of children to gain and maintain control over the behavior of children, rather than to enhance their learning, is repeated in the next section on questioning. It seems that a paradox is evident. Better lessons are provided for better students; poorer lessons are provided for poorer students; and the gap widens--naturally, not just expectancy, but in reality. Just as a malnourished person should not be maintained on an inferior diet, those learners requiring the most enriched learning must be those that receive it.

Questioning

The thinking among educators has been that teachers can control the quality of the performance and learning of children in instruction through the use of questions. Questions, it is claimed, stimulate student thought and participation in learning activities (Dillon, 1978). Higher level questions are supposed to stimulate higher thought (Blosser, 1973). The NCRE review uncovered a number of findings: Teachers ask questions at the rate of about sixty per thirty-minute period (Morrison, 1968); teachers use predominantly lower-level questions (Guszek, 1967); when teachers ask high-order questions, the questions are too difficult, forcing children to make errors, but with teachers ignoring the answers children give (Browne, 1971; Guszak, 1976). More recent studies provided the following results: teachers should wait at least three seconds for a pupil to respond to a question (Rowe, 1974); if a child does not respond after a reasonable amount of time, teachers should indicate that some response is expected (Anderson, Evertson & Brophy, 1979); eighty-five per-cent of the time in classrooms after a student answers a question, the teacher will ask another question (Mishler, 1975); typically, a teacher waits less than a second after a pupil has answered a question before asking the next question (Rowe, 1974); just asking children to sit and think about the answer to a question is negatively related to reading achievement (Soar & Soar, 1979); it is better that low socioeconomic children are asked questions that they can answer correctly; but having high socioeconomic status children being asked some questions that they cannot answer correlates positively with reading achievement (Brophy & Evertson, 1974); most teachers ask pupils questions that they can answer easily (Anderson, Evertson & Brophy, 1979).

Considerable study has been made of the type of questions that result in the greatest amount of gains in reading achievement. Stallings and Kaskowitz (1972-73) investigations showed that direct questions with an academic focus are positively related to gains; open-ended and questions without an academic focus are negatively related. Soar determined that questions with a single answer are positively related; and divergent, open-ended questions are negatively related to achievement (Soar, 1973). Dunkin and Biddle (1974) and Rosenshine (1976) concluded that questions about personal opinion and experience were negatively related and high-level questions were not correlated either negatively or positively with reading achievement. The results are somewhat mixed. Rosenshine has made the following summary:

> The research on types of questions and student achievement remains confusing even after one reads recent studies that incorporated improved design features. The effects of higher-order questions are nowhere to be seen, or are the effects of lower-order questions as clear as one would wish. And the few studies on ratios of higher to lower-order questions have not been any more revealing. The results are best stated as trends: lower-order questions tend to be positively related to achievement; higher-order questions tend to be unrelated, and personal questions tend to be negatively related. (Rosenshine, 1976, p.358)

Nevertheless, asking high level questions seems not to be functional for lower-grade pupils (Soar & Soar, 1979). There seems to be little point in asking difficult or complex questions (Brophy, 1979). Medley has summarized the findings succinctly when he states:

> He or she (effective teacher) does not encourage pupils to analyze, synthesize, evaluate, or indeed to do anything but answer rather narrow questions asked by the teachers. The teacher who encourages such pupils to express themselves freely, to think, to question, to discuss, is not effective in teaching them to read or to do arithmetic.(Medley, 1977, p.16)

One of the implications of the NCRE review raised the possibility that teachers seem to have a commitment to the specific and literal aspects of reading (Emans & Fox, 1974) Accepting Medley's and others' conclusions would seem to suggest that teachers were right in holding to such a belief. Yet, the NCRE study also questioned the heavy use of questioning in early reading instruction and raised the concern that "It is not enough for teachers to know about and be able to use different categories of questions; they must also know how and when to use them in a planned sequence" (Emans & Fox, 1974, p.53). The implications of the research reported here are too important to accept without considerable exploration and debate.

The first issue that is not clear from reading the research studies on questioning, and that probably must be clarified before any conclusions can be drawn, is the content of the questions that are used. Most of the research conducted to date on questioning have involved the primary grades. An emphasis of beginning reading is on decoding. Chall (1967), as reported in the NCRE and other studies and as was supported by the Twenty-Seven Beginning Reading Study (Dykstra, 1968), found that a code emphasis in the early grades results in greater reaching achievement. Not clear from the literature on questioning is whether or not researchers made a clear distinction between questions focused on decoding and those focused on comprehension. Rosenshine (1979) hinted that researchers considered only comprehension questions. If this is true, this particular concern would be answered. Nevertheless, it is not clear to this writer from reading the research studies that a distinction was actually made. If a distinction was not made, the findings from the research on questioning may only be a confirmation that a decoding emphasis is important for beginning reading instruction.

Assuming that a researcher focused on comprehension rather than decoding questions, a number of other concerns remain. Of course teachers can ask questions that are too difficult for children. Their minds are not yet developed. The NCRE review expressed the need to formulate higher-level questions that are appropriate for children in the primary grades. That this is not being done, does not mean that it could not be done. As Winne and Marx have written, "Students simply do not perceive what mental activities the teacher intends to invoke by such (complex) ques ions" (Winne & Marx, 1979, p.222). Doyle has expressed the view that "It may well be that task structures requiring comprehension are difficult to implement because of the nature of classroom processes (Doyle, 1979, p.201). The implication, of course, is that it may be possible to change classroom processes, like teacher control, so that higher-level questions would become effective learning aids.

A third concern involves the instrumentation used to measure reading achievement. Most reading tests use questions. The asking of many questions during instruction may only be preparing pupils to answer better the questions asked on tests and may not actually be fostering comprehension. If other instrumentation without questions had been used to measure reading achievement (for example, cloze tests), the results may have been different. Before educational practices are changed in light of the research evidence on questioning, possibilities of this kind should be explored.

Another concern is that there is no magic in questions themselves; but that how they are used is important. Asking questions is not teaching, but evaluating. Implementing the results of research on questioning in the classroom may, in the long run, lead to less instruction, not more. Durkin's excellent research is especially pertinent to this issue. She concluded:

1. Practically no comprehension instruction was seen. Comprehension assessment, carried on for the most part through interrogation, was common. Whether children's answers were right or wrong was the big concern.
2. In addition to being interrogators, teachers also turned out to be assignment-givers. As a result, time spent on giving, completing and checking assignments consumed a large part of the observed periods.
3. Other kinds of reading instruction were not seen with any frequency either.(Durkin, 1978-79, p. 520)

In addition, researchers on questions may be making dangerous assumptions. One assumption is that questions thought to be at a high level are actually at a high level; and low-level questions are actually at a low level. All reading comprehension involves complex thought, even when evaluated by recall questions. As Rothkopf has said, "The translation of written language into a useful internal representation obviously requires the exercise of highly skilled processing activities...." There is evidence that "instructional materials, even in the early grades, places extraordinarily complex demands on students" (Rothkopf, 1976, p.110). The level of reading material does not predestine the questions that teachers use. Teachers can ask simple questions about complex passages and complex questions about simple passages (Doyle, 1979). Long, complex questions can be answered with a simple yes/no exclamations, and even other questions (Dillon, 1978). Furthermore, the reactions a question causes in someone else cannot be decided by looking at the question (Dillon, 1978, p.53). Perhaps most importantly, there is no empirical evidence for hierarchial ordering of questions--only the abstractions defined by adult logic. Rosenshine (1976) recognizes the need to study the appropriateness of various higher-level questions. A question soliciting personal opinion is often considered to be of a higher order--but it may actually require very little mental effort on the part of the respondent, only

an emotional response. What may be considered to be low-level questions may actually require considerable thought. For example, grasping the main idea of a passage is generally referred to as a low-level question, but it requires the synthesis of ideas. Providing a title for a story requires the synthesis of ideas and creativity in formulating an attention-getting summary in the form of a title. Recognizing details may or may not involve judging what is important to remember. Following simple directions requires the grasping of purpose, the recognition of detail, the ordering of events, the prediction of outcomes, and probably more.

Perhaps the most significant works on questioning are those that question the validity of using questions at all for instruction. Having to remember the questions that a teacher asks, or worse, having to anticipate what questions the teacher may ask, may place too many demands upon readers' mental processes and prevent them from concentrating on the meaning of a passage. This may explain why SQR3 and similar instructional procedures do not turn out to be effective instructive devices in practice, although there is much research evidence to support the view that they should. As Rothkopf has written:

> Environmental demands made during reading, such as questions, change was is learned from reading a passage.... These results suggest that written lists of directions sometimes results in mental bookkeeping problems and a resultant drop in efficiency. (Rothkopf, 1976, pp.119-20)

There is some empirical evidence to support these contentions.(Winne & Marx, 1979).

The work of individuals such as Dillon raises other serious concerns about the use of questions. He cites evidence from personnel interviewers, group work, linguistic field researchers, and psychotherapists that questioning has negative influences (Dillon, 1978). As Lopez, a specialist on interviewing has said, "the use of direct questions are to be avoided whenever possible" (Lopez, 1965, p.252). As long ago as 1913, Yamada held the view that to rely on questions "is to make children passive and halting in their self-expression and independent mental activity" (Yamada, 1913, p.147). There is evidence that teacher questioning suppresses thought (Dillon, 1978). It is hard to escape the conclusion that individually directed questions inhibit responses in the child addressed (Boggs, 1972). Gall agrees: "We have only a slim basis for asserting that any questioning strategy affects student behavior positively (Gall, 1973, p.39). Dillon concludes that questioning:

> --threatens the individual
> --interrupts thought
> --causes participants to be ready with a response in case they are called upon, instead of thinking about the problem.
> (Dillon, September-October, 1981)

"Why" questions are especially damaging in the climate of contemporary classrooms as they are especially ambiguous. They may call upon the respondent to reason, show cause, justify, or describe a process and "function to express such things as objectives, disapproval, criticism; and the reaction is to defend, withdraw, or attack" (Dillon, November-December, 1981, p.18). In summary, Dillon states:

> A question-answer relationship fosters in the respondent dependency, passivity, and reactivity.... He answers when asked and otherwise keeps his mouth closed--undoubtedly his mind and heart as well.... As a consequence, responses tend to become shorter and shorter as further questions are put.... The outcome of a question-answer relationship is usually an evaluative and authoritative decision on the part of the questioner. (Dillon, September-October 1981, p.53)

Thus, similar to the research on teacher expectancies and classroom climate, this particular work on questioning seems to show that teachers' use of questions may be more influenced by their need to control classroom behavior of students than it is to enhance learning. As Dillon warns:

> The teacher may revert to questioning in order to regain control of the class.... Teacher questioning is an effective means to get them under control--it elicits attention, directs effort, specifies content, demands response, and so forth. Questioners are always the boss.... This attractive feature may account in part for the predominant use which teachers make of questions....(Dillon, September-October 1981, p.55)

Dillon (November-December 1981) provides several alternatives to the asking of questions. Lamenting the over-reliance of teachers on questioning, workbooks, and ditto sheets, Durkin asserts:

> Admittedly, not nearly enough is known about it [comprehension]. It still is a fact, nonetheless, that many of the procedures likely to improve comprehension and that are mentioned in all the reading methodology textbooks (and probably in all the reading methods courses) were never seen.(Durkin, 1978-79, pp.525-526)

One of the clearest impressions that is formed from reading the research on teaching behaviors is that work done in reading comprehension at the Center for Reading at the University of Illinois (Spiro, Bruce & Brewer, 1980) and other places (Berger & Robinson, 1982; Mour, 1978) is not being incorporated into the research on teaching behaviors. Somehow these two areas must be brought together

Specialized Teaching Behaviors

A number of studies have indicated that effective teaching behaviors are different for learners at various grade-levels or from different socio-economic status groups (Brophy & Evertson, Soar, Stallings & Kaskowitz, 1972-73; Tikunoff, Berliner & Rist, 1975). With respect to content, however, Gagne asserts that:

> Learning is not unique to subject matter. There is no sound rational basis for such entities as "mathematics learning," "science learning," "language learning," or "history learning," except as divisions of time.(Gagne, 1976, p.30)

If this view were valid, there would be no need for specialized methods courses in the content areas: The teaching of reading, mathematics, history, chemistry, English and the like would all be similar. Nevertheless, as Gage stated:

> The major reviews of research on teaching, such as those by Rosenshine and by Dunkin and Biddle, subordinate the role of the curriculum, or subject matter.... These reviewers have neglected differences between subject matters....(Gage, 1979, p.265)

There is considerable evidence that effective teaching does vary from content to content (Powel, 1979). Shulman (1974) calls for subject-matter specific researches on teaching which would require collaboration between subject-matter specialists and psychologists. Even Gage proposes a general level and specific levels for teaching. He hypothesizes that:

> Teaching behaviors--methods, styles, techniques, and the like --will fall into a hierarchical model [he proposes a six-level model], ranging from the highly (if not completely) general to the highly specific.... Just as a (general mental ability) has been relatively well accepted and supported by decades of empirical work, and various group factors (verbal numerical, spatial, and the like) have been almost as well substantiated and used, so it is conceivable that the dimensions [of a hierarchical model] will eventually be recognized and found useful in the practical work of teacher education.(Gage, 1979, p.283-85)

Inservice Education

The NCRE review showed the importance of inservice education. Although Bartolome (1969) and Chall and Feldmann (1966) found that teachers were unable to translate objectives into constructive teaching behaviors, other researchers who instructed in method prescriptions did help teachers to display appropriate behaviors in the classroom (Emans & Fox, 1974).

Wolf, Huck, and King (1967) demonstrated that teachers could learn to ask questions that resulted in higher achievement on critical reading tests. Anastasiow (1969) concluded that teachers could learn new behaviors, but only when they were consistent with the teacher's own personality. These findings have been confirmed and elaborated upon by recent research. Teachers need supervision (Berliner, 1979). In-service education can be effective under certain conditions: must suggest specific behaviors, not conflict with teachers' prior role definitions, be cost effective, use principles with which teachers have some familiarity and make sense to teachers, and not be too difficult for students or too demanding for teachers (Anderson, Evertson & Brophy, 1979; Clark & Yinger, 1979; Corno, 1979; Good, 1979).

Teachers do not plan systematically starting with a delineation of their objectives. Instead they start with the content to be covered. They are activity centered (Clark & Yinger, 1979). Yet, the difference between successful and unsuccessful teachers is the planning and preparation they do (Koumin, 1970). Teachers seldom change their plans in the middle of a lesson even when the lesson is going badly (Clark & Yinger, 1979). They seem to view that changing a lesson, when it is going badly, will make them look disorganized, and lose control of the classroom (Doyle, 1979).

Once again, the feelings of teachers that classroom control is more important than pupil learning becomes obvious. Since the same research results of ten years ago are still found in classroom studies, we can conclude that directives for teacher practices have not been put to use. Teachers, it seems, ignore research directives. Student learning seems not to be their primary goal and, possibly, not their primary responsibility.

Research Methodology

Although, as Medley states, "The only reliable source of such (accurate) information is sound research" (Medley, 1979, p.11), the history of education reveals that research has resulted in a questionable knowledge-base. The research on what teacher characteristics were most desirable did not relate to helping pupils achieve their goals. "Linkages[between teacher behavior and student achievement] had proven difficult to establish, even into the 1970's (Brophy, 1979, p.733). The research on teaching methodology has produced inclusive findings. Numerous explanations have been provided to explain this phenomena. As described previously in this paper, some people have suggested that it is in the nature of teaching methods themselves that makes it impossible to demonstrate the superiority of one method over another. Others have suggested that since it is teachers who are the subjects of investigations, the appropriate unit of analysis are classes and not pupils. Thus, studies would have to involve larger samples than are now typically done or even feasible (Medley, 1979). Others may agree with Brophy: "The influence of teacher classroom-management skills is pervasive, often strong enough to mask the 'influence of more limited and context-specific instructional skills'" (Brophy, 1979, p.743).

Educational researchers since the 1960's have moved away from conducting experimental studies to correlational studies. Many of the most productive findings in the Twenty-Seven Beginning Reading Studies came from correlational analyses and not from a comparison of group means. In a single study hundreds of correlating coefficients can be calculated. Rosenshine, in his work (1976) that has so significantly contributed to thinking about direct instruction, selected, using his own subjective judgment, just six relationships out of several hundred potential correlations in the studies he reviewed. Yet, as Gage concludes, "It seems safe to assume that the true relationship, if any, between any single dimension of teacher behavior and pupil achievement or attitude is probably low" (Gage, 1978, p.230). It may be that the apparent success of recent studies on teaching behaviors, in contrast to the previous studies on teaching methodology, is due more to the research techniques used (correlational vs. experimental) and not the importance of what is being investigated. When findings from the recent correlational studies on teaching behaviors are tested in experimental studies (and tested in experimental studies they must be as Rosenshine (1976) and Brophy (1979) have pointed out in order to determine cause and effect relationships) results may prove to be no more productive than the early experimental studies involving methodology. Furthermore, some of the perhaps most significant questions asked about reading education cannot be investigated through the use of correlational research, e.g., the use of a simplified orthography for beginning reading instruction, or whether synthetic phonics result in more pupil gains than analytic phonics. Talmage and Eash hold the view:

> Attention to the variables of curriculum and instruction within a specified improvement effort pays greater dividends than working on the more nebulous interpersonal variables that are the focus of many organizational development projects.(Talmage & Eash, 1979, p.174)

Another concern is that educators seem to have been very quick to generalize from the research on direct instruction to all teaching. Direct instruction benefits, as conceptualized by Rosenshine, came from research conducted in the early grades, on low socioeconomic status children, and involved early achievement in reading and arithmetic. There is little evidence to suggest that the conclusions should be generalized to other parts of the curriculum, at other grade levels, or children of different socioeconomic status (Brophy, 1979; Good, 1979). As Rosenshine has said, "The extent to which these generalizations need to be modified as one serves to other grade levels and contexts remains to be determined (Rosenshine, 1976, p.364).

Goodlad (1979) questions whether or not it is possible to increase endlessly "time on task," deemed essential in order for direct instruction to be effective, to more than two or three hours per day. There is no attempt, or desire, in this paper to defend the concepts of open education, informal education, or individualized instruction. Yet, too many investigators seem to have equated these practices with lack of discipline, teacher and pupil socializing, and teachers grading papers during class time (Corno, 1979). It would probably be fruitful to compare well structured and implemented programs of open or informal education with direct instruction. This seems not to have been done. Rosenshine (1976) has made such a proposal. Similarly, the long-term effects on reading and mental develop-

ment of those reading-related activities not found to be directly related to reading achievement, e.g., story-telling and creative dramatics, should be undertaken.

Although schools have been more successful in recent years than they were in the past in teaching the rudimentary skills of reading such as decoding, there is much evidence from the National Assessment of Educational Progress evaluation that they continue not to be able to help pupils achieve better in reading comprehension (NAEP, 1981). Medley cautions that:

> But teachers are not hired to cram information into students' heads to be retained just long enough to enable them to pass objective tests. Teachers are hired to educate children, to produce important, lasting changes in their behavior, not short-term changes in test scores.... There is no evidence that teachers adept in producing quick gains are also effective in producing permanent, important changes in pupils. (Medley, 1979, p.17)

The original NCRE review raised the following question: "Are we preventing change in classroom teaching behaviors by introducing change only according to what we study?"(Emans & Fox, 1974, p.58). Current research may be getting the results that it is only because it is looking for what it is finding. The influence of educational research may be more of a product of investigator bias than a concern for the improvement of important classroom learning. As Goodlad has said:

> Much of western society is thinking narrowly about its schools, following a period of inflated expectation. Schools have overreacted in part because these more limited expectations are easier to meet than are the existantial demands of the badly-needed reforms.(Goodlad, 1979, p.412)

There is considerable evidence that different curricula have different effects. Walker and Schafforzick (1974) reviewed twenty-three studies of

what they called "new" and "traditional" curriculum. Their conclusion was similar to Rosenshine's who concluded, "Each curriculum seemed to be most effective when the post-test included the type of content emphasized in that curriculum" (Rosenshine, 1976, p.349). Peterson reviewed research studies on open and traditional programs. She concluded, "With traditional teaching, students tend to perform slightly better on achievement tests, but they do worse on tests of more abstract thinking" (Peterson, 1979, p.63). It should be remembered that the research on direct instruction indicated that pupils were given little time to think before they were required to respond to questions. Yet, time is needed to answer complex-thought questions (Dillon, 1981). Similarly as, Corno has said:

> The problem for research and for practice is not only to see that class time becomes academically engaged time when academic learning outcomes are the goal, but...an adequate analysis of classroom time must be sufficiently complex to encompass complimentary cognitive and social processes existing in the classroom across time.(Corno, 1979, p.275-277)

and Doyle:

> A student may...make little effort to acquire problem solving skills if the academic task can be accomplished by simply recalling solutions arrived at by the teacher or by other students in class.(Doyle, 1979, p.141)

It has never been demonstrated that children must learn the decoding skills of reading in the first and second grades in order for them to be successful readers later in life. Perhaps other primary goals are more important, e.g., those dealing with classification and measurement as stressed in the British infant schools. Needed are replications of the well known longitudinal Eight Year Study conducted a generation ago.

Finally, a significant and recurring finding in this review of the research literature is that teachers use classroom management to control the behavior of children. Of course, this is understandable--learning does not take place in a disruptive atmosphere. The research reported in this paper, such as that dealing with direct instruction, does provide a framework with which it is possible to categorize the teaching behaviors now favored by researchers. Nevertheless, classroom management techniques, whether in regard to grouping, praise, or questioning, seems to be used not to enhance learning, but to make the teacher look good in the eyes of other adults. As Duke writes, "Classroom control is no longer regarded as a means to an end, but as an end in itself" (Duke, 1979, p.362). Even more distressing is the recent research indicating that adults in industrial societies are hostile and punitive toward children (Phillips, 1982). The goal of educational research must not be just to make the job of teachers easier but also to help pupils learn. It must be possible to identify teaching behaviors that not only make for good control of the classroom, but, at the same time, enhance academic learning directly.

For their leadership studies, Lewin, Lippitt and White (1939) provided separate club groups of eleven-year-old boys with three different kinds of leadership: democratic, laissez-faire, and autocratic. Democratic leaders evolved club policies by guiding discussion among club members. All club activities were explained and clarified by the leader and alternative procedures were suggested. Leaders provided only objective praise and blame, i.e., task relevant. The leader interacted as though he were a regular,

but not central, group member. Members of the democratic group were co-operative and voluntarily work-centered. Inter-member conflicts were readily resolved and contacts with the leader were friendly and work related. Post-meeting behavior was calm.

Autocratic leaders imposed their own policies on the group. They predetermined the steps of the task and assigned them one step at a time to the members. They dictated the procedures to be followed. They provided no overall view of the task for the members. The basis for the leaders' praise and blame was not stated; it reflected personal rather than objective standards. The leader remained aloof from the activities, except when demonstrating. The autocratic clubs developed two kinds of sub-groups, aggressive and apathetic. Autocratic group members developed little commitment to the task; they performed each step in robot-like fashion and became distracted when the leader left the room. The members were rivalrous and scapegoated various members and the leader. The group meetings ended with an explosive burst of rowdiness.

Any policies established in the laissez-faire group were supplied by the members. The leader described the resources and gave information only on request. The leader provided no evaluation. He was neutral, but not "stand-offish" towards all group activities. Laissez-faire club members sought high quantities of information from their leader and looked to him and one another for personal attention and approval. This group was least productive of the three. The members of the group were more active, but not at the task, when the leader was out of the room than when he was in it.

I believe that it is safe to assume that almost everyone in education, or at least, who has been in education for more than ten years, is familiar with the findings of the above studies. Perhaps some of us may have forgotten how compelling, although in a Democracy not surprising, the results are. The findings of these studies often influenced classroom teaching from the 40's until the 60's. For, voluntary, task motivated and productive behaviors are generally considered to be the hallmark of the responsible citizen in a democracy.

Many classrooms between the 40's and the 70's, especially in the center cities and other deprived areas, may have suffered by having classroom climates more like the laissez-faire or more punitive autocracies than the democratic situation described above. Uninvolved and inactive teachers may have conducted classrooms where students did not learn, never developed an interest in subject matter, and sought attention and approval for social rather than productive reasons.

The studies conducted since the 60's, and reported in this paper, are intended to help all teachers to become more active in ways to improve student learning. Many reports reflect the relationship between the quality and quantity of teacher rewards and student achievement. Other studies investigated direct instruction in subject matter as a vehicle to ensure specific student achievements. Time spent on focused instruction in subjects judged to be of high priority for classroom learning is emphasized as a teacher requirement and methods which favor teacher control of all classroom behavior are prescribed.

Autocratic climates do result in high levels of student performance as both the leadership studies and the more recent teaching behavior studies reviewed in this paper indicate. Democratic leaders provide productive climates also, as reported by Lewin, Lippitt and White. Autocratic climates, however, also produce student-to-student and student-to-teacher conflicts which result in interpersonal as well as task management problems for both club leaders and classroom teachers. In fact, management problems especially of student behaviors, seem to be a major concern of present-day teachers. Many studies are designed and conducted to provide evidence to help to prepare teachers to handle management problems by giving them tools to shore up their classroom autocracies. A question we seem to be asking ourselves today is, "If our autocracy becomes vigorous enough will even the aggressive student reactors become apathetic in the classroom?" So preoccupied are we with providing teachers with the means to control and manage students and learning that we have failed to study sufficiently how to develop "good students," and, therefore, good workers and good citizens--students who are eager to learn, who are rewarded by having learned, and who respect (admire, not fear) teachers for the help they can give to learners.

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